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July 23, 2013

**VIA ECFS**

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, D.C. 20554

Re: The Fiber-to-the-Home Council Americas' Petition for Rulemaking to  
Establish a Gigabit Communities Race-to-the-Top Program; WC Docket  
No. 10-90

Dear Ms. Dortch:

On behalf of the Fiber-to-the-Home Council Americas, enclosed please find the  
Fiber-to-the-Home Council Americas' Petition for Rulemaking to Establish a Gigabit  
Communities Race-to-the-Top Program.

Please contact the undersigned at (202) 342-8518 if you have any questions  
regarding this filing.

Respectfully submitted,



Thomas W. Cohen

*Counsel to The Fiber-to-the-Home Council  
Americas*

Enclosures

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Universal Service Gigabit Communities	)	RM No. _____
Race-to-the-Top Program	)	
	)	
Connect America Fund	)	WC Docket No. 10-90

**FIBER-TO-THE-HOME COUNCIL AMERICAS'  
PETITION FOR RULEMAKING TO ESTABLISH  
A GIGABIT COMMUNITIES RACE-TO-THE-TOP PROGRAM**

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**FIBER-TO-THE-HOME COUNCIL AMERICAS’  
PETITION FOR RULEMAKING TO ESTABLISH  
A GIGABIT COMMUNITIES RACE-TO-THE-TOP PROGRAM**

The Fiber-to-the-Home Council Americas (“FTTH Council” or the “Council”),<sup>1</sup> by its attorneys, hereby petitions the Commission to institute a rulemaking proceeding to adopt rules to establish and implement a Gigabit Communities Race-to-the-Top Program (“Program”) to distribute a discrete amount of universal service catalyst funding (“Catalyst Funds”) in communities each year for five years beginning in 2014. The Program would support the deployment of ultra-high-speed networks with symmetrical gigabit services for community anchor institutions and their surrounding related neighborhoods in Tier II and Tier III markets<sup>2</sup> within two years from the distribution of Catalyst Funds. In turn, these networks will accelerate the creation of a new

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<sup>1</sup> The FTTH Council is a not-for-profit entity whose mission is to accelerate deployment of all-fiber access networks by demonstrating how fiber-enabled applications and solutions create value for service providers and their customers, promote economic development and enhance quality of life. The FTTH Council’s members represent all areas of the broadband access industry, including telecommunications, computing, networking, system integration, engineering, and content-provider companies, as well as traditional service providers, utilities, and municipalities. As of today, the FTTH Council has more than 250 entities as members. A complete list of FTTH Council members can be found on the organization’s website: <http://www.ftthcouncil.org>.

<sup>2</sup> The Petition uses the term “Tier II or Tier III” markets or communities. These are, for purposes of the Petition, markets/communities within a “Rural area” (47 C.F.R. § 54.5) or a Micropolitan Statistical Area, or, if within a Metropolitan Statistical Area, an incorporated community with a population of less than 200,000.

generation of transformational applications that will promote more rapid investment in and deployment of ultra-high-speed networks across the country. In the end, this virtuous cycle of innovation and investment in both demand and supply will enhance economic development and job creation, furthering the United States' global leadership and international competitiveness.<sup>3</sup>

## I. INTRODUCTION AND SUMMARY

Talk to leaders in communities that already have all-fiber, symmetrical gigabit networks, and they will tell you that ultra-high-speed broadband service *per se* was not the driver for their deployments. Rather, these communities understood that symmetrical gigabit networks, because they provide unlimited bandwidth for consumers and businesses, are essential and potentially transformational enablers for the development of innovative applications that drive economic growth and social interaction. In effect, such applications can transform the mindset and capabilities of communities, including the vital anchor institutions that are, and will increasingly be, the foundation of so much activity. Such applications will turn consumers into producers, engender collaboration, and unlock a wide range of creative activities.

Yet, while communities want gigabit networks, because of the gap between the high up-front cost of the network and the lag in operators obtaining sufficient revenues<sup>4</sup>, they face

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<sup>3</sup> Journalists from around the world – from Belgium, China, France, Germany, Japan, Korea, and Turkey – came to Kansas City, Missouri, for the Council's May 2013 Community Toolkit Conference, reflecting the international recognition of the United States' leadership position in supporting ultra-high-speed networks. In addition, on the heels of the Google Fiber deployment, a new provider in the Canadian city of Vancouver, BC, has announced plans to deploy a new gigabit network in the city. Samantha Murphy, *OneGigabit Brings Google Fiber Speeds to Canada*, Mashable.com (July 8, 2013), available at <http://mashable.com/2013/07/08/onegigabit/>. These developments demonstrate the immense promise of gigabit networks, but also highlight the need for America to widely deploy these networks to keep up with gigabit competition on the international stage.

<sup>4</sup> See e.g., Remarks of Blair Levin, Greater DC Chapter of the Internet Society, July 16, 2013, available at <http://www.gig-u.org/open-letter#more-344>.

difficulties in having them built. This is especially true in markets outside major urban areas, where costs are higher and where it is more difficult to obtain sufficient demand. As a result, most communities do not have the basic infrastructure to propel innovation and economic and social development.

The issue facing the Commission and other policymakers is how to address this critical concern and begin to take concrete steps to both develop a critical mass of gigabit communities to engender tomorrow's applications and services as well as bridge the gap in the market between the community haves and have-nots. That is the rationale for the Gigabit Communities Race-to-the-Top Program proposed herein by the Council. Complementing the new E-Rate modernization initiative to connect schools (K-12) and libraries with ultra-high-speed service<sup>5</sup> – and building on the long-range vision of the Commission's National Broadband Plan (the "NBP")<sup>6</sup> and the "Gigabit City Challenge"<sup>7</sup> – the Program provides an effective response to the needs of Tier II and III communities to have access to ultra-high-speed networks. The Race-to-the-Top Program will not only benefit the communities that receive Catalyst Funds but, by encouraging more efficient builds and by demonstrating how these networks can be the platform

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<sup>5</sup> See, News Release, *FCC Launches Modernization of E-Rate Program to Deliver Students & Teachers Access To High-Capacity Broadband Nationwide* (rel. July 19, 2013) ("There is a growing consensus that E-rate needs to be updated and revitalized with a renewed focus on ensuring that all schools and libraries have affordable access to high-capacity broadband"). See also, "President Obama Unveils ConnectED Initiative to Bring America's Students into Digital Age," available at <http://www.whitehouse.gov/the-press-office/2013/06/06/president-obama-unveils-connected-initiative-bring-america-s-students-di>.

<sup>6</sup> Federal Communications Commission, *Connecting America: The National Broadband Plan* at 10 (Mar. 17, 2010) ("NBP").

<sup>7</sup> News Release, *FCC Chairman Julius Genachowski Issues Gigabit City Challenge to Providers, Local, and State Governments to Bring at Least One Ultra-Fast Gigabit Internet Community to Every State in U.S. by 2015: FCC's Broadband Acceleration Initiative to Foster Gigabit Goal* (rel. Jan. 18, 2013) ("Gigabit City Challenge Release").

for the next generation of applications requiring ultra-high speeds, it will accelerate the availability of advanced ultra-high-speed communications capability to all areas of the country.

Under the Program, facilities and service providers, working with local governments, community anchor institutions, and their associated neighborhoods, would apply for Catalyst Funds through proposals to deploy gigabit networks in Tier II and Tier III markets and to provide voice, other telecommunications, and broadband services at reasonable prices to anchor institutions and surrounding neighborhoods. The Council envisions an annual national competition for Catalyst Funds by which the Commission would select up to fifteen meritorious proposals annually and provide each of them with up to \$10,000,000 in Catalyst Funds. Accordingly, each year up to \$150 million in Catalyst Funds would be awarded, and as many as seventy-five projects would be funded over the five-year life of the Program for a total of up to \$750 million.

The funding would come from Connect America Fund Phase I and Phase II monies that are not accepted or are refused, respectively, by the price cap local exchange carriers (“LECs”) to whom they are allocated before the refused funds are auctioned. The Race-to-the-Top Program, therefore, would not require an increase in the current universal service distribution budget and would not increase the contribution burden of providers of telecommunications service and other telecommunications.

The service and facilities providers seeking Catalyst Funds could be either private or public entities, and need not be eligible telecommunications carriers (“ETCs”). Applicants would have to demonstrate the ability to deploy the proposed networks within two years after the award of Funds, would have reporting obligations associated with the network builds and use of the Funds, and would be financially responsible and legally accountable for the Catalyst Funds.

Any Catalyst Funds that are awarded must be at least matched by other monetary contributions to the proposed networks made or secured by the applicants.

In considering applications for Catalyst Funds, the Commission should evaluate a series of factors in addition to the basic application requirements outlined above. These factors include, but would not be limited to, the involvement of and connections among community anchor institutions and their associated neighborhoods, the reasonableness of the business case, the efficiency of the proposed network and its deployment, the extent to which the proposed network will stimulate additional and extended deployments as well as local economic development, and the experience and financial soundness of the service provider and/or vendor applicants.

The legal authority for the Program is found under both Section 254 and, independently, Section 706 of the Communications Act of 1934, as amended (the “Act”). The Council urges the Commission to institute the Race-to-the-Top Program without delay.

## **II. THERE IS A COMPELLING NEED FOR A GIGABIT COMMUNITIES RACE-TO-THE-TOP PROGRAM**

America’s economic growth, social welfare, and citizen engagement increasingly depend on the capabilities of its broadband infrastructure. Our broadband networks are the roads, ports, and highways of the 21<sup>st</sup> century. With that in mind, on January 18, 2013, former FCC Chairman Julius Genachowski announced his “Gigabit City Challenge,” calling for public and private actors to come together to establish “at least one gigabit community in all 50 states by 2015.”<sup>8</sup> The former Chairman rightly recognized that establishing a critical mass of gigabit communities throughout the nation will allow “innovators [to] develop next-generation

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<sup>8</sup> Gigabit City Challenge Release at 1.



applications and services that will drive economic growth and global competitiveness,” and preserve America’s role at the forefront of innovation.<sup>9</sup> Communities with all-fiber networks and ultra-high-speed services will provide America with a “strategic bandwidth advantage,” sparking the next great wave of digital innovation and creating new jobs, businesses, and entire industries.

Blair Levin, a leading architect of the NBP, recognized that the nation could achieve a “strategic bandwidth advantage” only through “a critical mass of communities with world-leading bandwidth,” which would lead to “human capital that knows how to design, build, operate and above all, innovate on top of the best networks in the world,”<sup>10</sup> *i.e.*, design and make available transformational applications that require ultra-high speeds. Applications made possible by gigabit networks will aid the communities in which they are deployed to even better manage public resources, hold the promise to enhance civic participation and revolutionize digital social interactions within and among community anchor institutions and between them and their surrounding neighborhoods, and present great potential to attract new investment and innovative entrepreneurs. Significantly, the successful deployment of sufficient numbers of pioneer gigabit communities as fertile ground for the development of such transformational applications will inevitably spur other communities and service providers to build their own ultra-high-speed networks in numerous additional communities. Moreover, once a critical mass of gigabit communities has been established, best practices will emerge that will decrease

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<sup>9</sup> *Id.*

<sup>10</sup> Blair Levin, “Global Leadership in the Broadband Economy and 10th Amendment Values,” Remarks before the Wisconsin Broadband Summit (Apr. 4, 2013).

deployment costs and increase economic benefits. Further, we will raise a generation of “gigabit natives” that are so essential to America’s future.<sup>11</sup>

Just last week, in initiating a proceeding to modernize the E-Rate program and implement the President’s ConnectED proposal, the Commission once again recognized the power of ultra-high-speed, all-fiber networks. In issuing the item, Acting Chairwoman Mignon Clyburn stated that “we will roll up our sleeves and do what it takes to ensure that our nation’s schools and libraries have the broadband connections needed to meet their current and future requirements.”<sup>12</sup> Commissioner Jessica Rosenworcel added:

Before the end of the decade, every school should have access to 1 Gigabit per 1000 students. Libraries, too, will need access on par with these capacity goals. And this provides more than just scale for content and device providers. Because the spillover effect for this kind of broadband in local communities is substantial. Building Gigabit connectivity to anchor institutions like schools and libraries is the ticket to Gigabit cities and the ticket to digital education and economic growth.<sup>13</sup>

In addition, Commissioner Ajit Pai stated that “in 2013, E-Rate should be about funding next-generation infrastructure that will facilitate digital learning.”<sup>14</sup>

All of the Commission’s initiatives – from the National Broadband Plan to the Gigabit City Challenge to E-Rate modernization – are logical and necessary extensions of policies reflecting a deep commitment to ensure widespread deployment of advanced communications services. The universal service mandate of Section 254(b)(2) of the Act establishes a national policy to provide “[a]ccess to advanced telecommunications and information services . . . in all

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<sup>11</sup> Declaration of Michael Burke at ¶ 14 (June 13, 2013) (“Burke Decl.”).

<sup>12</sup> Statement of Acting Chairwoman Mignon L. Clyburn, Re: Modernizing the E-rate Program for Schools and Libraries, WC Docket No. 13-184 (rel. July 19, 2013).

<sup>13</sup> Statement of Commissioner Jessica Rosenworcel, Re: *Modernizing the E-rate Program for Schools and Libraries*, Notice of Proposed Rulemaking, WC Docket No. 13-184 (rel. July 19, 2013) (“Rosenworcel E-Rate Statement”).

<sup>14</sup> Statement of Commissioner Ajit Pai, Re: *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184 (rel. July 19, 2013).

regions of the Nation.”<sup>15</sup> This mandate is echoed in Section 706 of the Telecommunications Act of 1996 (“1996 Act”), which emphasizes our national drive to “encourage the provision of new technologies and services to the public.”<sup>16</sup> Section 706 charges the Commission with the mandate to “take immediate action to accelerate deployment of [advanced communications] capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market.”<sup>17</sup>

Recognizing this imperative, the NBP outlined an important set of goals essential to achieving globally competitive bandwidth capabilities.<sup>18</sup> Notably, Goal Number 4 of the NBP called for “[e]very American community [to] have affordable access to at least 1 gigabit per second broadband service to anchor institutions such as schools, hospitals and government buildings.”<sup>19</sup> The NBP also recognized the key role of institutions such as “community centers, employment offices, churches and other social service offices” in boosting broadband adoption, and the need to increase the capacity of these community partners.<sup>20</sup>

There can be no question that many of tomorrow’s great technological advancements will spring from the anchor institutions in gigabit communities. As Commissioner Rosenworcel stated this past week, bringing gigabit connectivity to anchor institutions represents “the ticket to

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<sup>15</sup> See 47 U.S.C. § 254(b)(2).

<sup>16</sup> 47 U.S.C. § 157 (hereinafter “Section 706”).

<sup>17</sup> 47 U.S.C. § 1302.

<sup>18</sup> See NBP at 10.

<sup>19</sup> *Id.* at 10.

<sup>20</sup> *Id.* at 176. See Comments of the Schools, Health & Libraries Broadband (SHLB) Coalition, WC Docket No. 10-90 (July 15, 2013) at 1-2 (“Community anchor institutions provide a wide variety of Internet-based services to the community, including distance learning, public access computing, digital literacy training, telemedicine, job training, and basic research. Community anchor institutions also serve the disabled, the elderly, low-income people, and other vulnerable members of the community who might not otherwise have access to the Internet. In short, broadband is an essential component of the increasingly valuable and diverse array of services that these institutions provide to all members of the community, not just residential consumers.”).

Gigabit cities, and the ticket to digital education and economic growth.”<sup>21</sup> Indeed, community anchor institutions in the initial communities that have access to gigabit networks have shown some of the tremendous possibilities that applications running on these networks hold. For example, public safety officials in Chattanooga, Tennessee, have used applications riding on the city’s ultra-high-speed network to manage the city’s electric smart grid dynamically in response to ever-changing needs and uses, promoting energy efficiency throughout the city.<sup>22</sup> In addition, using applications made possible by the gigabit network powering the “Case Connection Zone” in Cleveland, Ohio, doctors and surgeons have explored advanced surgical simulators and have deployed cutting-edge health management solutions that allow doctors to care for home-bound patients remotely.<sup>23</sup>

Gigabit communities also are proving their worth as catalysts for economic development. In Kansas City, Missouri, and Kansas City, Kansas, the availability of ultra-high-speed broadband from Google Fiber has attracted entrepreneurs to the city who want to build a new generation of applications and services. Through Homes for Hackers and the Kansas City Startup Village, entrepreneurs have built a community of innovators enticed by the possibilities presented by the Google Fiber network.<sup>24</sup> Indeed, a prominent venture capitalist has even

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<sup>21</sup> See Rosenworcel E-Rate Statement at 3.

<sup>22</sup> See Dave Flessner, *EPB telecom cuts power costs*, Times Free Press (Sep. 22, 2012), available at <http://www.timesfreepress.com/news/2012/sep/22/epb-telecom-cuts-power-costs-chattanooga-ctfp/?local>.

<sup>23</sup> See Case Connection Zone: Health and Wellness at Home, available at [http://caseconnectionzone.org/health\\_wellness.html](http://caseconnectionzone.org/health_wellness.html).

<sup>24</sup> See Kansas City Startup Village, available at <http://www.kcstartupvillage.org>; Homes for Hackers, available at <http://homesforhackers.com>. Michael Burke, Advisory Council Co-Chair to KC Digital Drive, notes that prior to gigabit deployments in the city, the entrepreneurial community was geographically and socially dispersed, holding back the city’s potential as an innovation hub. See Burke Decl. ¶ 8. (KC Digital Drive is “a community-driven, regional effort to take advantage of [Kansas City’s] unique infrastructure and establish Kansas City as a global leader in digital innovation.” See <http://www.googleconnectskc.com>. Among other

purchased a home in a Kansas City “fiberhood” to allow entrepreneurs to live for free in Kansas City and build gigabit-ready applications using the network.<sup>25</sup> Similarly, the power of the ultra-high-speed network in Chattanooga, Tennessee has drawn large corporations like Alstom, Amazon, and Volkswagen to the city, creating over 7,000 jobs and attracting billions of dollars in capital investment in a city once referred to as the “dirtiest city in America.”<sup>26</sup>

Entrepreneurs and nonprofits are just beginning to explore the innovative possibilities of applications riding on gigabit networks. These applications reveal that it is not simply a matter of nascent ultra-high-speed networks being faster than their broadband predecessors, but that the uses to which they may be put are different in kind from what heretofore has been possible. In 2012, the Chattanooga Electric Power Board opened an application-incubation facility called

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responsibilities, KC Digital Drive is “charged with the implementation and stewardship” of Kansas City’s digital playbook, “Playing to Win in America’s Digital Crossroads,” a document developed by the Mayors’ Bi-State Innovations Team (“MBIT”).) However, with the announcement and development of the Google Fiber project, the community of innovators and entrepreneurs has coalesced around the network. See Burke Decl. ¶¶ 7-9; see also Marguerite Reardon, *Google Fiber spawns startup renaissance in Kansas City*, CNET (June 19, 2013), available at [http://news.cnet.com/8301-1023\\_3-57589981-93/google-fiber-spawns-startup-renaissance-in-kansas-city/](http://news.cnet.com/8301-1023_3-57589981-93/google-fiber-spawns-startup-renaissance-in-kansas-city/). Indeed, the deployment of gigabit networks in the city has caused a stream of “fiber tourists”—entrepreneurs who visit Kansas City in order to experience the power of gigabit networks—some of whom have returned to Kansas City from more traditional innovation hubs to build and grow their businesses.

<sup>25</sup> See Brad Feld, *My New FiberHouse in Kansas City*, FeldThoughts (Jan. 13, 2013), available at <http://www.feld.com/wp/archives/2013/02/my-new-fiberhouse-in-kansas-city.html>.

<sup>26</sup> See Marguerite Reardon, *FCC pushes for gigabit broadband in all 50 states by 2015*, CNET (Jan. 18, 2013), available at [http://news.cnet.com/8301-13578\\_3-57564815-38/fcc-pushes-for-gigabit-broadband-in-all-50-states-by-2015](http://news.cnet.com/8301-13578_3-57564815-38/fcc-pushes-for-gigabit-broadband-in-all-50-states-by-2015); see also Eleanor Beck, *Chattanooga transforms into “Gig City” with some of the world’s fastest internet*, WBIR.com (Feb. 13, 2013), available at <http://www.wbir.com/rss/article/254142/2/Chattanooga-transforms-into-Gig-City-with-some-of-worlds-fastest-internet>; see also FACT SHEET: Bolstering High-Speed Broadband to Boost the Economy, Executive Office of the President (June 13, 2012), available at [http://www.whitehouse.gov/sites/default/files/microsites/ostp/broadband\\_fact\\_sheet\\_06\\_13\\_2012.pdf](http://www.whitehouse.gov/sites/default/files/microsites/ostp/broadband_fact_sheet_06_13_2012.pdf).

“GigTank” with the goal of building applications to utilize the capabilities of gigabit networks.<sup>27</sup> Among other applications, companies in the GigTank program have built cloud-based collaboration tools that facilitate information sharing and efficiency among scientific researchers.<sup>28</sup> Similarly, entrepreneurs have developed gigabit-ready applications through the US Ignite Partnership, a non-profit public-private organization created to “foster[] the creation of next-generation Internet applications that provide transformative public benefit.”<sup>29</sup> Such applications have the potential to not only transform lives but to save them as well. One application being developed by researchers at the University of Massachusetts, and supported by US Ignite, is the Collaborative Adaptive Sensing of the Atmosphere (“CASA”) program, which uses predictive storm-tracking technology and “data 5 to 10 times more detailed than current radar systems” to provide citizens with advanced notification of severe weather events.<sup>30</sup> However, to reap the benefits of such advanced technologies, an essential element is often missing today: “advanced networks with gigabit speeds, software definition, and local cloud capabilities.”<sup>31</sup>

Another application, SightDeck, is a first-of-its-kind interactive presentation and collaboration system that utilizes novel telepresence and digital compositing technology to allow multiple parties in separate locations to communicate and solve problems using an 11’ x 6’

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<sup>27</sup> See Laura Baverman, *Chattanooga’s Gig City makes play to be ‘Internet of things’ capital*, Upstart Business Journal (Mar. 15, 2013), available at <http://upstart.bizjournals.com/companies/hatched/2013/03/15/need-bandwidth-come-to-gig-city-and.html>.

<sup>28</sup> See GIGTANK 2012 Winner Banyan Plans Move to Chattanooga, available at <http://www.thegigcity.com/co.lab-gigtank-2012-winner-banyan-plans-move-to-chattanooga>; see also <https://banyan.co/>.

<sup>29</sup> See What is USIgnite?, available at <http://us-ignite.org/what-is-us-ignite>.

<sup>30</sup> See Doppler Radars? Old news (Nov. 9, 2012), available at <http://usignite.fissiondev.com/2012/11/doppler-radars-old-news/>.

<sup>31</sup> *Id.*

touchscreen, with all participants displayed on the screen as if they were in the same room.<sup>32</sup>

This interactive screen can support high-definition streaming video and bandwidth-intensive, cloud-based applications (e.g., 3D-modeling software), which may be used by multiple participants at one time. In this way, SightDeck serves both as a gigabit-ready application in itself and as a platform for other applications requiring ultra-high-speed bandwidth.

As Richard Welnowski, CEO of SightDeckKC, explains, SightDeckKC—a Kansas City reseller of SightDeck—is developing tools for community anchor institutions that would harness the power of gigabit networks to allow for real-time collaboration in fields such as telemedicine, emergency response, and collaborative education.<sup>33</sup> For example, SightDeckKC has been working with telemedicine experts from a local Kansas City children’s hospital to create a SightDeck-powered “briefcase,” which would allow telehealth centers at schools to host real-time health care appointments between students, providers, and parents without requiring the students or parents to take time away from school or work.<sup>34</sup> Additionally, SightDeck has important potential uses for emergency response agencies, which may utilize the tool as a means of providing real-time, on-the-ground analysis of disaster zones to quickly, accurately, and effectively manage response teams.<sup>35</sup> Without ultra-high-speed connectivity, future versions of SightDeck and SightDeck-powered vertical applications will not be able to operate at their full potential, and as the technology develops and demand for ultra-high-definition, real-time video streaming increases, gigabit capacity will be essential.<sup>36</sup> Indeed, in the case of disaster recovery

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<sup>32</sup> For a demonstration video, see <http://www.sightdeckkc.com>.

<sup>33</sup> See Richard Welnowski Declaration at ¶¶ 9-13 (July 23, 2013) (“Welnowski Decl.”).

<sup>34</sup> See *id.* ¶ 10; see also Brief+Case Health, available at <https://mozillaignite.org/apps/457/>.

<sup>35</sup> See Welnowski Decl. ¶ 11.

<sup>36</sup> *Id.* ¶ 8.

and emergency responsiveness, where every millisecond counts, the ability to observe and react in real-time is foundational to the effectiveness of the tool.

There is a growing recognition that gigabit networks can provide a community with tremendous advantages. In response to Google's "Think Big with a Gig" program, which led to the creation of the Kansas City fiber network, over one thousand communities submitted applications to host gigabit test-beds.<sup>37</sup> And yet, due to the high up-front capital cost of building ultra-high-speed networks and the still developing applications that will drive revenues, few communities have access to gigabit speeds.<sup>38</sup> In essence, communities face the conundrum that no gigabit applications are developed without gigabit networks on which to deploy them, and there is a basic reluctance to build a gigabit network without the clear promise of revenues that will largely derive from gigabit applications.

It is evident that a government-led effort to jumpstart the market can have an enormous payback. Even today, with most users still operating on last-generation broadband technologies, the capabilities of advanced video, cloud-based services, and other bandwidth-intensive applications are growing. According to the Cisco 2012 Zettabyte Report, and echoed by Verizon, while today video comprises around half of Internet traffic, in the coming years, "[t]he sum of all forms of IPvideo (Internet video, IP VoD, video files exchanged through file sharing,

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<sup>37</sup> James Kelley, *Next steps for our experimental fiber network*, Google Official Blog (Mar. 26, 2010; updated Apr. 15, 2010), available at <http://googleblog.blogspot.com/2010/03/next-steps-for-our-experimental-fiber.html>.

<sup>38</sup> Select communities in the U.S. have access to gigabit networks. For instance, municipalities like Chattanooga, Tennessee, and Lafayette, Louisiana—have demonstrated success in building and deploying gigabit networks. In addition, private projects like Google Fiber have been integral in bringing ultra-high-speed networks to Kansas City and—on a community-by-community basis—to its environs. Yet, despite these advances, only a small number of communities in 14 states currently have access to gigabit networks.



video-streamed gaming, and videoconferencing) will . . . reach 86 percent of total IP traffic.”<sup>39</sup> Moreover, increasing proof of the efficacy of cloud-based services and applications through multiple devices will generate greater need for always-on connectivity and ultra-high-speed bandwidth. So much more could be done if communities had the networks that could support the full capabilities and potential of these applications. The Council urges the Commission to bridge the gap in the market and provide a catalyst for gigabit network development so that anchor institutions and citizens in communities in all areas of the nation will have access to bandwidth capabilities necessary to receive advanced services and run such advanced applications.

Federal programs have moved our country in the direction of the ultimate goal: providing unlimited bandwidth to all residents, businesses, and institutions. The National Telecommunications and Information Association’s (“NTIA”) Broadband Technology Opportunities Program (“BTOP”) and Rural Utilities Service Broadband Initiatives Program (“BIP”) expanded broadband infrastructure on a one-time broadband stimulus model in the wake of the Great Recession. The Connect America Fund, a product envisioned by the NBP and a crucial aspect of universal service reform, will provide much-needed basic tier broadband access to previously unserved communities throughout the nation.<sup>40</sup> The existing E-Rate program provides vital support to our nation’s schools and libraries, especially to those in rural and disadvantaged communities that would otherwise lack adequate resources. The FCC has also coordinated important workshops so that stakeholders may share best practices and encourage

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<sup>39</sup> Cisco, *The Zettabyte Era* at 5 (May 30, 2012) (“Cisco 2012 Zettabyte Report”); *see also* News Release, Verizon Users in New Era of Consumer Broadband; New FiOS Portfolio Features Speeds of 75, 150 and 300 Mbps (May 30, 2012), *available at* <http://newscenter.verizon.com/press-releases/verizon/2012/verizon-ushers-in-new-era-of.html> (“Verizon News Release”).

<sup>40</sup> *See Connect America Fund*, et al., WC Docket No. 10-90 *et al.* FCC 11-161, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663 (rel. Nov. 18, 2011) (“*USF/ICC Transformation Order*”) (subsequent history omitted).

gigabit deployments. All of these programs are vital to the overall objectives of Section 254 of the Act and the universal service goals of our country. But the Commission recognizes the value of end user access to unlimited bandwidth and that much more needs and can be done to accomplish this goal. That is aim of the NBP and the Gigabit City Challenge – and now the E-Rate modernization initiative.

The evidence demonstrates that community anchor institutions hold both the greatest need for ultra-high-speed bandwidth and the greatest promise for innovation and economic growth.<sup>41</sup> First, these institutions tend to be located in geographic clusters, decreasing the cost of investment in the network and increasing the efficiency of the network and its deployment. Second, the areas in which such institutions are located are typically community hubs favored with good transportation, ensuring maximum access and adoption. Adoption in anchor institutions, in turn, will increase demand for access in homes and businesses that interact with the institutions. The success of networks deployed in the anchor institutions and their surrounding neighborhoods will incent additional network build-outs and broadband adoption. The NBP recognized that “people are more likely to adopt and use broadband if the people they care about are online and if they see how broadband can improve their quality of life in key areas such as education, health care and employment.”<sup>42</sup> Third, providing ultra-high-speed access to our anchor institutions—particularly government buildings and municipal services— should materially improve government efficiency and accessibility, promoting civic engagement and lowering the cost of municipal services to taxpayers.

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<sup>41</sup> See Benjamin Lennett, Sara J. Morris, and Greta Byrum, *Universities as Hubs for Next-Generation Networks*, New America Foundation, at 3 (Apr. 2012).

<sup>42</sup> NBP at 171 (citing Horrigan, *Broadband Adoption and Use in America* at 19; Rogers, *Diffusion of Innovations*).

Sections 254 and 706 make clear that the Commission has an obligation to play an active role in catalyzing the spread of advanced communications capability to all areas of the nation. The initial deployments of ultra-high-speed networks have begun to demonstrate the tremendous potential for communities that have them. But there continues to be a significant gap in the market inhibiting the widespread deployment of ultra-high-speed capability across the nation. This is the precise circumstance where the government should enter to achieve the greater good by adopting a targeted, catalytic program, as envisioned by Congress.

To these ends, the Council herein proposes that the Commission develop a competitive program to encourage and reward those communities in Tier II and III markets that seek to develop preeminent gigabit networks for connected anchor institutions and their surrounding associated neighborhoods, one that will jumpstart market conditions facilitating further deployments throughout their areas and the entire country. This approach, the Gigabit Communities Race-to-the-Top Program set forth herein, will create a competition that will achieve the highest return with limited government support. First, the ultra-high-speed networks will ensure institutions and the individuals they serve see the development of applications that cannot operate to their true potential without the unlimited capacity of gigabit broadband networks. These new applications will open doors to as-yet-undreamed-of activities and operations. In addition, gigabit test-beds will help spark more complete networks in the communities where they are located<sup>43</sup> and, eventually, a nationwide roll-out of additional ultra-high-speed network builds where they are not now. Finally, networks supported by the Program can be expected to quickly spur innovation, economic growth, and social interaction that far

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<sup>43</sup> As explained in Section II, applications for funding supported by local government officials that commit to leverage the networks built with Catalyst Funds should receive particular merit.

outstrips the relatively modest financial investment of the Program by leading the way, in partnership with private efforts, for ubiquitous deployment of gigabit capability.

### **III. ELEMENTS OF THE PROPOSED RACE-TO-THE-TOP PROGRAM**

In this section, the Council sets forth the basic elements of the proposed Gigabit Communities Race-to-the-Top Program. As noted above, the Council envisions holding annual competitions to fund the most far-reaching Race-to-the-Top projects over a five-year period to seed network builds that would support symmetrical gigabit broadband services to community anchor institutions and their associated neighborhoods in Tier II and Tier III markets.<sup>44</sup> Under the Program, facilities and service providers who are working with local governments, community anchor institutions, and their associated neighborhoods would apply for Catalyst Funds through proposals to deploy gigabit networks to end users and provide telecommunications and broadband services<sup>45</sup> at reasonable prices to anchor institutions and surrounding neighborhoods. The Program is directed toward the development of last-mile gigabit connectivity in these communities or neighborhoods anchored by community institutions and with existing middle-mile capabilities.<sup>46</sup> The facilities and service providers could be either private or public entities.

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<sup>44</sup> See 47 U.S.C. § 1305(b)(3)(A). In the Recovery Act, “Community anchor institutions” are defined to include schools, libraries, medical and healthcare providers, community colleges and other institutions of higher education, and other community support organizations and entities. The Council employs that same definition in this Petition.

<sup>45</sup> The Program is consistent with the Commission’s determination in the *USF/ICC Transformation Order* (§ 75) “to require all USF recipients to offer voice service” and “as a condition of receiving support . . . also offer broadband service.”

<sup>46</sup> While the Program favors areas with existing middle-mile capabilities for gigabit networks, proposed projects may incorporate select, additional middle-mile facilities if essential to implement the project’s thrust.

After reviewing the applications and supporting documentation, the Commission would select the most meritorious proposals and provide each of them with up to \$10,000,000 in Catalyst Funds to match their own, at-least-equal contributions.<sup>47</sup> The Commission would make selections from among the proposals to receive Catalyst Funds on merit according to established criteria. The Catalyst Funds would be distributed without express limitations on the number of selectees per State or even per region of the country. Consequently, the areas to be served by a single project could straddle state boundaries. Or two or more projects receiving Catalyst Funds in a given year could be located in a single state or adjacent states. The objective would be for the Commission to pick the best projects from the applications in any given year taking into account a variety of considerations and without artificial limitations. Nonetheless, the geographic distribution of Catalyst Funds would be one of the factors taken into consideration by the Commission.

Even though the Program is limited and would sunset in five years, the Council intends for the Program to operate consistent with the policy adopted as part of the *USF/ICC Transformation Order* that universal service support should not be provided in areas where the requisite broadband service is already provided.<sup>48</sup> The Commission adopted this policy to ensure that providers have an incentive to invest private capital in broadband networks. The policy also maximizes the use of limited government support by avoiding overbuilds of the requisite service in some areas while other areas go without. To that end, the Program should not support projects in the same geographic area where symmetrical gigabit service is already provided or

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<sup>47</sup> While the Council envisions that funding would be committed up front, it should be released by the government as deployment milestones are achieved and in accordance with strict accountability measures. Catalyst Fund recipients would have certain reporting obligations and would be subject to audit by the Commission. See Section II.A, *infra*.

<sup>48</sup> See *USF/ICC Transformation Order*, ¶ 20.

where providers have already commenced build-out of such network.<sup>49</sup> Similarly, Catalyst Funds should not be made available where a government agency has committed other support for such a network, *e.g.*, funds from state universal service or stimulus programs.

As additional incentive for the investment of private capital to achieve the aims of the Program, the Program should enable an incumbent wireline provider in an area to respond when a project application is submitted and give a commitment (which should include a project plan and appropriate officer certifications) that it will undertake the same or substantially similar project within one year, although without accepting any government support. If such a commitment is given, then the application should be removed from consideration.<sup>50</sup> Further, the Council intends that multiple incumbent wireline providers can submit applications for projects in the same or similar geographic area involving possibly the same or similar community anchor institutions. After all, the Program's aim is to foster a competition that will end in the selection of the "best" projects.

The Council proposes that Catalyst Funding for the Race-to-the-Top Program come from "unused" support in the current Connect America Fund programs targeting areas serviced by price cap local exchange carriers. The Council proposes using part of the funds allocated to price cap local exchange carriers that these carriers do not accept either in the 2013 Phase I

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<sup>49</sup> The Council understands that high-speed broadband networks operate throughout the United States today. But, as noted at the outset of the comments, those networks do not provide the "unlimited bandwidth" of gigabit networks and therefore do not foster the very different type of applications that can only flourish in the virtually frictionless atmosphere provided by gigabit networks. Creating the climate for widespread deployments of these "unlimited bandwidth" networks is the ultimate aim of the Program.

<sup>50</sup> Any such incumbent commitment should explain that the project will be deployed in two years or less and that symmetrical gigabit service will be available to end users at a reasonable price.

program or with their right of first refusal in the Phase II program.<sup>51</sup> The Race-to-the-Top Program, as proposed by the Council, would not require an increase in the current universal service distribution budget, and therefore would not increase the contribution burden of providers of telecommunications service and other telecommunications.<sup>52</sup>

#### **A. Applications for Catalyst Funds and Evaluation Criteria**

Catalyst Fund applications would be submitted by facilities and service providers that have teamed with community anchor institutions and the surrounding related neighborhoods and local government entities.<sup>53</sup> As a threshold matter, the applications would have to describe in detail a proposed project to provide (symmetrical) gigabit service to community anchor institutions and the surrounding related neighborhoods in a given Tier II or Tier III area that would be supported by the Catalyst Funds, including a description of which anchor institutions would be served, the nature of the institutions, what links between anchor institutions would be created, the existing and contemplated level of broadband services in the surrounding neighborhoods to be served, and, perhaps most importantly, how the project would serve as a

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<sup>51</sup> By targeting Tier II and III communities, the Council seeks to maximize use of its Race-to-the-Top support in higher-cost areas. Should the price cap local exchange carriers accept all support, the Council would propose another source for Catalyst Funds which would not require an increase in the contribution level.

<sup>52</sup> The Council strongly believes in fiscal responsibility, which is consistent with the Commission's establishment of a budget for the Connect America Fund (see *USF/ICC Transformation Order*, ¶¶ 123-126). See also Remarks of Commissioner Ajit Pai on Connecting the American Classroom: A Student-Centered E-Rate Program, American Enterprise Institute (July 16, 2013) at 8 ("the FCC...should prioritize fiscal responsibility") ("Remarks of Commissioner Pai").

<sup>53</sup> Although the Council envisions that proposals would be the result of collaborative efforts between providers, anchor community institutions, and/or local governments, each application for Catalyst Funds would name a single entity as applicant or lead applicant. The lead applicant would be the recipient of the Catalyst Funds, if selected, and would be financially responsible and legally accountable for the use of those Funds as well as meeting the reporting requirements and the two-year deployment deadline.

catalyst to drive new applications, additional network builds, and community development. Projects will be favored if they serve a broad range of community anchor institutions – and interactivity among those anchor institutions – as well as their associated neighborhoods. The Council intends that the Race-to-the-Top Program should focus on the interrelationships among anchor institutions and their communities in a way that other universal service programs have not, resulting in a broader impact rather than only the specific missions of individual beneficiary institutions. Consequently, projects that are selected for Catalyst Funds should be transformational and drive urban and civic improvements, economic development, and job creation within Tier II and Tier III markets in a way existing programs have not.

Applicants for Catalyst Funds would have to demonstrate persuasively the ability to deploy the proposed fiber networks and begin delivering gigabit-network-dependent applications and services within two (2) years of funding. A project that demonstrates the ability to deploy and initiate service in a shorter period of time will be more advantageously considered on that account.

All applicants must demonstrate the ability to provide ongoing monitoring of their progress and reporting on its deployment, the speeds it is offering, and the response to the network deployment, in terms of customers and connections. Recipients of support (1) will be required to report to the Commission periodically on various aspects of the project, including the construction of the networks, the commencement of operations, the number of ultra-high-speed connections, the applications supported by the network, and the uses to which the gigabit network is being put and (2) would be subject to audit by the Commission. Further, because the objective of the program is to jumpstart gigabit network deployments in communities throughout the country, education of the potentially affected community members, businesses, and



institutions and related information dissemination is a key component. Accordingly, the Commission should hold an annual seminar with recipients and their communities to discuss their progress, lessons learned, and problems encountered and how they have been addressed.

In addition to the basic criteria just described, a number of factors would be considered by the Commission in making its selections:

1. Involvement of and Connections among Anchor Institutions/Associated

Neighborhoods: As noted above, Race-to-the-Top applicants should demonstrate the project will provide ultra-high-speed facilities and services to community anchor institutions, such as: (1) community colleges and other institutions of higher education; (2) community support organizations and entities, such as community centers and co-working facilities; and (3) pre-collegiate schools, libraries, medical and healthcare providers. Significantly, the applicants should demonstrate how their proposed projects would facilitate the dynamic interaction among the anchor institutions and their surrounding neighborhoods, spurring additional synergies supported by the gigabit connections that the project would make possible. Applications for Catalyst Funds should describe how the networks will be used by the anchor institutions, including the applications and programs that will be supported using ultra-high-speed connections that are not possible with more “typical” broadband connections. Support, in the form of declarations or other testimonials from officials representing the local governments and anchor institutions, should be given particular weight.<sup>54</sup>

2. Reasonableness of Business Case: Applicants for Catalyst Funds should provide details on the costs for the network that they will construct and the services they will provide, the

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<sup>54</sup> Special consideration should be given, for example, to applications supported by statements that communities or institutions are committing resources to leverage the proposed network to promote economic development.

funds available to them for the proposed project, and the prices for services that they will charge to community anchor institutions and their associated neighborhoods. The applicant should demonstrate that the \$10 million of available Catalyst Funds, in conjunction with at least an equal amount of matching support, will be sufficient to realize the project and ensure it is sustainable at reasonable end user pricing for symmetrical gigabit service.

In support of the business case demonstration, applicants should explain how the anchor institutions to be served are ready to receive and take advantage of the gigabit broadband service within their institutions and in collaboration with other community anchor institutions, and the surrounding neighborhoods in that market. To that end, documentation from community anchor institutions regarding their current use of broadband may help evince a readiness for gigabit services or activities they are undertaking or planning that will benefit from symmetrical gigabit capabilities. For example, a community center or library may demonstrate plans to leverage gigabit capacity by creating a 3D-printing lab or co-working space for local entrepreneurs, or by making available a software lending library.<sup>55</sup> The applicant should explain, in effect, how the availability of ultra-high-speed connections over the Internet or among anchor institutions and their surrounding associated neighborhoods will promote innovation in communications-supported applications. For example, there may be applications in the community that have been implemented that are incapable of achieving their full potential given current speeds. Ultra-high-speeds may allow the complete merits of the applications to be more readily demonstrated. Such

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<sup>55</sup> See, e.g., Signe Brewster, *Why public libraries should follow Chicago's lead and build maker labs*, GigaOm (July 8, 2013), available at <http://gigaom.com/2013/07/08/why-public-libraries-should-follow-chicagos-lead-and-build-maker-labs/>; Alexandria Co-working Network adds 2 communities, ASU News (July 11, 2013), available at [https://asunews.asu.edu/20130711\\_alexandrianetwork\\_expands](https://asunews.asu.edu/20130711_alexandrianetwork_expands); Patrick Marshall, *Kansas City proposes gigabit-speed software lending library*, GCN (July 19, 2013), available at <http://gcn.com/Articles/2013/07/19/Kansas-city-google-fiber-software-lending-library.aspx>.

applications that have been deployed or that would be deployed by the anchor institutions or in the surrounding neighborhoods should be detailed in the application. Lastly, applicants should explain in concrete terms the steps that the community has taken or will take to foster a sustainable local entrepreneurial ecosystem capable of developing innovative applications using the gigabit network.

3. Efficiency of Deployment: Applicants should demonstrate their ability to commence deployment promptly following receipt of Catalyst Funds and to complete deployment and commence providing substantial services to the anchor institutions identified in the application within two (2) years of that date.<sup>56</sup> The requirement for operation within two years should not be satisfied through commencement of token services. Accordingly, a critical part of any application will be to have the cooperation of local and other government entities and other parties, where appropriate, to facilitate the network construction and the roll out of services. The Program should favor applications where local and other government entities have adopted practices that will most lower the cost of construction.

Applicants should provide evidence of permits received or at least advanced discussions with the communities and anchor institutions the networks will support regarding the deployment of facilities in public and private rights-of-way. To the extent the poles, ducts, conduits, or other rights-of-way of electric, gas, or other utilities or other communications providers will be used, the applicants should provide evidence of license or pole attachment agreements or advanced discussions regarding the same with the utilities or third-party providers. The applicant should also demonstrate that it already has the local franchises and, where those franchises are not yet in

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<sup>56</sup> Catalyst Funds should be distributed contingent upon compliance with the regulations of the Program, including efficient and timely deployment, measured against specific benchmarks.

place, what the status is of its efforts to obtain the requisite franchises.<sup>57</sup> The applicant should explain the extent to which it has the pole attachment agreements, conduit occupancy agreement(s), and other private rights-of-way agreements it may need to use the infrastructure, land, or buildings of other providers. To the extent that the infrastructure, land, or buildings of non-providers will be used to construct the network, the applicant should explain the status of efforts to secure the necessary private agreements.

Another consideration related to efficiency of network deployment is whether the applicant already has some or all of the regulatory and other approvals that it will need to provide the services in the target community. To the extent it will provide regulated services over the contemplated project, does it already hold the necessary state certificate(s) of authority? To the extent the services it will provide will require interconnection with the networks of others, does the applicant have appropriate interconnection agreements in place?

4. Efficiency of Network: The efficiency with which the community anchor institutions would be connected should also be considered, which may depend in part upon geographic considerations outside the control of the applicants. Thus, for example, where colleges and universities are in the proximity of health care providers and medical research facilities and both government and other public institutions, it may be possible to more efficiently deploy the networks to create the ultra-high-speed connections between and among these organizations. On the contrary, where community anchor institutions are more widely scattered within a municipality, the “per unit” costs of a new fiber network build may be greater. Considerations such as these should be addressed in the applications. The Commission, when

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<sup>57</sup> Special consideration would be given to proposals for gigabit networks in communities where local officials have established expedited permitting and approvals processes to eliminate or minimize the bureaucratic delay that often occurs with right-of-way, construction, and other permitting and approvals associated with communications network infrastructure deployment.

reviewing applications, should look for those projects which would yield more “bang for the buck.”

Another basic characteristic of any successful applicant will be the number and nature of community anchor institution locations that would be passed by the planned deployment and what the anticipated numbers of connections are relative to the dollars projected to be spent. To be successful, applicants should be able to show that their deployments will efficiently support not only the community anchor institutions that justify the network but that the network will be constructed in such a way to make reconfigurations possible in an efficient manner as community needs evolve and grow. In other words, applications will be more favorably received if the applicant can demonstrate that the networks are likely to play an integral role in supporting the needs of anchor institutions not only in the short term, but in the intermediate and long-term as well.

5.     Matching Support: An essential element of the program is the provision of matching support by the applicant and the amount of such support. A matching requirement will ensure the commitment of the applicant and efficient use of the Catalyst Funds.<sup>58</sup> The Council proposes that the Catalyst Fund would provide, at most, \$10 million of support and would be joined with at least an equal amount of matching support. The matching funds could come from either public (non-federal) or private sources and should be backed up by documentation assuring the match if the Catalyst Funds are received.

6.     Opportunities for the Project to Stimulate Additional or Extended Deployments and Advances: The Commission should favor proposed projects that have the potential to

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<sup>58</sup> This is consistent, for instance, with the recently adopted rule (47 C.F.R. § 54.633(a)) for “Universal Service Support for Health Care Providers.” *See also* Remarks of Commissioner Pai at 6 proposing a matching requirement for the E-Rate program to enhance accountability.

stimulate additional deployment of gigabit services beyond the community anchor institutions. For example, are the community anchor institutions that will be reached near corporate centers or concentrated residential areas, making future expansion of the ultra-high-speed network a feasible proposition? Will the installation of future backbone or ring facilities be plausible to leverage the gigabit broadband facilities? As noted above, proposed deployments that not only have the potential to support the community anchor institutions that immediately justify the project but also will likely play an integral role in supporting the needs of the larger community in the intermediate and long-term as well will be more favorably reviewed.

7. Service provider/vendor experience and financial soundness: Applicants should be able to demonstrate their basic service, technical, and financial qualifications to support the foregoing showings. Consideration of such qualifications should be central to the Commission's applicant review process. The qualifications of applicants will help ensure, as practicably as possible, that the money will go to projects that not only appear meritorious on paper but have the backing of a facilities or service provider that has "delivered" in the past, albeit perhaps on less ambitious projects. The applicant's technical qualifications and operational experience will help ensure the projects will be substantially realized within two years of the distribution of Catalyst Funds. The applicant's experience as a provider and its financial soundness will give added weight to the demonstrations of the business case. While consideration of such qualifications should not be decisional among multiple qualified applicants, the Commission may use such qualifications to disqualify applications that may lack the basic prerequisites for success.

## **B. Race-to-the-Top Funding and Its Sources**

The Council submits that the Race-to-the-Top Program can be effective by providing \$150 million in Catalyst Funds annually for a period of five years and by providing up to \$10 million of support for a project with an at-least-equal matching amount from the facilities or service providers. This would fund approximately fifteen (15) projects each year, or 75 over the five-year period. This number of additional gigabit community projects should provide an excellent basis upon which to achieve the aims of the program – to help create a critical mass of gigabit networks that will allow applications dependent on ultra-high-speed communications to be realized and best practices to be developed, and thereby accelerate the deployment of gigabit capabilities more widely and, ultimately, ubiquitously.

This amount of overall funding is reasonable. In keeping with the fact that the projects are designed to connect diverse community anchor institutions and associated neighborhoods within a larger community, \$20 million per project (at a minimum, including the matching funding) to receive Catalyst Funds is appropriate. By their nature, the broadband deployment projects supported by the Program would be largely if not exclusively last-mile projects.<sup>59</sup> By way of comparison, under the BIP, through September 2010, 285 last-mile projects were funded through grants and loans totaling approximately \$3.25 billion, or about \$11.4 million per

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<sup>59</sup> In its recent order adopting the costing model platform for use with the Connect America Fund, Phase II, representing an estimate of the average monthly forward-looking cost of an efficient provider, the Wireline Competition Bureau concluded after considerable analysis that “the most efficient wireline technology being deployed today in new builds is FTTP,” i.e., fiber-to-the-premises. *In the Matter of Connect America Fund*, WC Docket No. 10-90 *et al.*, DA 13-807, Report and Order, ¶ 33 (rel. Apr. 22, 2013) (“*Cost Model Report and Order*”). The Catalyst Funds should be used to support projects that deploy last-mile gigabit networks to end user customers.

project.<sup>60</sup> As such, the amounts requested for the Race-to-the-Top Program are relatively comparable and appropriate.

The source of such funding should come from “unused” support in the Connect America Fund programs intended for use in areas serviced by price cap local exchange carriers. The Commission recently adopted a Report and Order in its Connect America Fund proceeding authorizing a second round of Connect America Fund Phase I funding while it works to commence Phase II.<sup>61</sup> The Commission noted that it expected this second round of Phase I funding to be the last as the Commission has made significant progress toward Phase II implementation.<sup>62</sup> The *Report and Order* provided that any Phase I support remaining unclaimed at the end of the second round of Phase I support will be added to the Phase II budget, pro-rated in equal annual amounts over the Phase II five-year time period, increasing the yearly budget for Phase II by an amount equal to one-fifth of the unclaimed funds. In addition, under the Connect America Fund Phase II program, price cap local exchange carriers have a right of first refusal to accept support. The Council proposes to add any unaccepted amounts to seed the \$150 million annually needed for the Race-to-the-Top Program before the unclaimed second-round Phase I and, subsequently, Phase II monies are made available through other means to providers.

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<sup>60</sup> Recovery Act Broadband Initiatives Program, [http://www.rurdev.usda.gov/utp\\_bip.html](http://www.rurdev.usda.gov/utp_bip.html).

<sup>61</sup> *In the Matter of Connect America Fund*, WC Docket No. 10-90, Report and Order (May 22, 2013).

<sup>62</sup> *Id.* ¶ 2. See also *Cost Model Report and Order*, *supra*.



### C. Eligibility for Catalyst Funds

As a general matter under Section 254, eligibility for high-cost universal service support is limited to eligible telecommunications carriers (“ETCs”).<sup>63</sup> Under Section 706, no such restriction applies. As set forth in the next section of this Petition, authority to implement the Race-to-the-Top Program resides independently in both Section 254 and 706. Accordingly, eligibility need not be limited to eligible telecommunications carriers for the Program, given the separate basis for the Program under Section 706(b) of the Act. As the Commission explained in the *USF/ICC Transformation Order*, these two sections, particularly when they work in tandem, do not limit universal service support to telecommunications carriers, let alone ETCs:

Our decision to exercise authority under Section 706 [for support of broadband networks] does not undermine section 254’s universal service principles, but rather ensures their fulfillment. By contrast, *limiting federal support based on the regulatory classification of the services offered over broadband networks as telecommunications services would exclude from the universal service program providers who would otherwise be able to deploy broadband infrastructure to consumers. We see no basis in the statute, the legislative history of the 1996 Act, or the record of this proceeding for concluding that such a constricted outcome would promote the Congressional policy objectives underlying sections 254 and 706.*<sup>64</sup>

Similarly here, in support of ultra-high-speed gigabit networks, the Commission should avoid a constricted outcome that limits federal support based on the classification of the services offered. A service or facilities provider should not have to be an ETC to receive Catalyst Funds. Otherwise, the Program may not reach its full potential to promote the principles of Section 254(b) or the objectives of Section 706.

Even if authority for the Program were limited to Section 254, the Commission should not restrict eligibility to ETCs. Rather, the Commission should forbear under Section 10 of the

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<sup>63</sup> See 47 U.S.C. § 254(e).

<sup>64</sup> *USF/ICC Transformation Order*, ¶ 72 (emphasis added).

Act to the extent that it concludes that Section 254(e) applies. Pursuant to section 10 of the Act, the Commission shall forbear from applying to a telecommunications carrier or telecommunications service, or class of telecommunications carriers or telecommunications services, any statutory provision or regulation if it determines that: (1) enforcement of the provision or regulation is not necessary to ensure that the telecommunications carrier's charges, practices, classifications, or regulations are just, reasonable, and not unjustly or unreasonably discriminatory; (2) enforcement of the provision or regulation is not necessary to protect consumers; and (3) forbearance from applying such provision or regulation is consistent with the public interest.<sup>65</sup>

As an initial matter, enforcement of the ETC eligibility requirements in Section 254(e) as part of the Race-to-the-Top Program is unnecessary to ensure that any telecommunications carrier's "charges, practices, classifications, or regulations . . . are just, reasonable, and not unjustly or unreasonably discriminatory."<sup>66</sup> Limiting Catalyst Funds to ETCs is not necessary to ensure reasonable rates to end users for the services to be provided over the ultra-high-speed networks supported by the Program. Indeed, by opening up eligibility to a broader range of service and facilities providers, the application process will be more competitive, better ensuring a more rapid deployment of ultra-high-speed networks at reasonable service prices to end users. Limiting Catalyst Funds to ETCs would not be competitively neutral, one of the principles under Section 254(b)(7) adopted by the Commission as noted below, and would unnecessarily limit competition for the funds.<sup>67</sup>

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<sup>65</sup> See 47 U.S.C. § 160(a).

<sup>66</sup> *Id.*

<sup>67</sup> See *Federal-State Joint Board on Universal Service*, Report and Order, FCC 97-157, CC Docket No. 96-45 (1997) ¶¶ 590-594 (subsequent history omitted) ("First Report and Order").

In addition, enforcement of Section 254(e)'s limitation to ETCs is not required to benefit consumers. Consumers, rather, would benefit from additional service and facilities providers being able to submit applications, helping ensure the most efficient use of Catalyst Funds. Broader participation by applicants will also promote delivery of applications and voice and other communications services dependent on ultra-high-speed networks to Tier II and III communities that otherwise, in the short run, at least, would not be able to make the business case for such networks. As described earlier, applications and services made available by gigabit networks will directly bring tremendous benefits to the communities supported by the Program and, indirectly, will jumpstart the eventual delivery of such applications and services to all communities across the nation. For similar reasons, forbearance would further the public interest, with no countervailing considerations.<sup>68</sup>

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<sup>68</sup> Assuming *arguendo*, the Commission does not believe that forbearance from the ETC requirement of Section 254(e) is justified under the Section 10 three-part test and requires the provider be an ETC, the Commission should adopt regulations that address the scope and timing of state review of any application made by an awardee of Catalyst Funds under Section 214(e)(2) of the Act, 47 U.S.C. § 214(e)(2). Such regulations will ensure the widest possible number of providers have the opportunity to compete for Catalyst Funds and to utilize them, if awarded, without undue delay. Specifically, the Commission should adopt regulations in connection with the Race-to-the-Top Program that implement Section 214(e)(2) by restricting the nature and time of any state review of a Catalyst Funds awardee's request for ETC status. Consistent with the base requirements of Section 214(e)(1), which will be demonstrated by the Catalyst Fund award itself, the only inquiry by the State should be whether the awardee has the necessary state authorization to provide the services within Tier II and Tier III communities in the State. The regulations should provide that the State may take no more than thirty (30) days after the request for ETC status by an awarded is made, after which the request is deemed granted. The Commission has the authority to adopt the regulations interpreting the ambiguous provisions of Section 214(e)(2) in the context of the Program. See 47 U.S.C. §201(b). Cf. *City of Arlington et al. v. FCC.*, No. 11–1545 (S. Ct. May 20, 2013).

#### **IV. THE COMMISSION HAS THE LEGAL AUTHORITY TO ADOPT THE RACE-TO-THE-TOP PROGRAM UNDER SECTIONS 254 AND 706 OF THE ACT**

The Commission has the legal authority to adopt the Race-to-the-Top Program under both Sections 254 and 706 of the Act. Establishment of the Program is within the authority of the Commission under Sections 254(b) and (c) to designate those services and facilities eligible for universal service support that reflect advances in telecommunications and information technologies and services and ensures that advanced telecommunications and information services are provided in all regions of the nation. Further, the Commission possesses independent authority under section 706 of the Telecommunications Act of 1996<sup>69</sup> (“1996 Act”) to fund the deployment of ultra-high-speed broadband networks using Catalyst Funds and thereby accelerate deployment of advanced telecommunications capability to the public in a reasonable and timely fashion.

##### **A. Section 254 Gives the Commission Authority to Adopt and Implement the Race-to-the-Top Program**

In Section 254 of the Act, the Congress conferred on the Commission the express statutory authority to support telecommunications services that it designates as eligible for universal service support.<sup>70</sup> Section 254(c)(1) defines “[u]niversal service” as “an evolving level of telecommunications services that the Commission shall establish periodically under this section, taking into account advances in telecommunications and information technologies and services.” The Commission, in the *USF/ICC Transformation Order*, articulated its authority under Section 254 to not only designate the types of telecommunications services for which support would be provided, traditionally voice telecommunications, “but also to encourage the

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<sup>69</sup> 47 U.S.C. § 1302(a).

<sup>70</sup> 47 U.S.C. § 254(c).

deployment of the types of facilities that will best achieve the principles set forth in section 254(b) and any other universal service principle that the Commission may adopt under section 254(b)(7).”<sup>71</sup> On this basis, the Commission is implementing the Connect America Fund and requiring support recipients to deploy broadband network capabilities over which the requisite voice telecommunications, including interconnected VoIP, will be provided.<sup>72</sup>

Section 254(b) sets forth six principles upon which the Commission must “base policies for the preservation and advancement of universal service.”<sup>73</sup> Central among these principles are that “[a]ccess to advanced telecommunications and information services should be provided in all regions of the Nation,” and that “[c]onsumers in all regions of the Nation . . . should have access to telecommunications and information services, including . . . advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas” and at reasonably comparable rates.<sup>74</sup> In addition, the Commission may

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<sup>71</sup> *USF/ICC Transformation Order*, ¶ 64.

<sup>72</sup> The Commission explained in the *USF/ICC Transformation Order* why it was sufficient under Section 254 for support-recipient broadband networks to offer voice via Internet protocol, even though the Commission has not concluded that interconnected VoIP is a telecommunications services: “Interconnected VoIP services, among other things, allow customers to make real-time voice calls to, and receive calls from, the PSTN, and increasingly appear to be viewed by consumers as substitutes for traditional voice telephone services. Our authority to promote universal service in this context does not depend on whether interconnected VoIP services are telecommunications services or information services under the Communications Act.” *Id.* ¶ 63. *See also id.* ¶ 63, n.67, where the Commission explained further, “If interconnected VoIP services are telecommunications services, our authority under section 254 to define universal service after ‘taking into account advances in telecommunications and information technologies and services’ enables us to include interconnected VoIP services as a type of voice telephony service entitled to federal universal service support. And, as explained below, if interconnected VoIP services are information services, we have authority to support the deployment of broadband networks used to provide such services.”

<sup>73</sup> 47 U.S.C. §§ 254(b)(1)-(7).

<sup>74</sup> 47 U.S.C. §§254(b)(2) and (3). More completely, Section 254(b)(1)-(7) set forth the following principles to guide the Commission (and the Federal-State Joint Board on Universal Service):

integrate "[s]uch other principles as the Joint Board and the Commission determine are necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Act."<sup>75</sup>

Germane to the present Petition, the Commission has on two occasions adopted additional principles to those specifically articulated by Congress. Most significantly, in the *USF/ICC Transformation Order*, the Commission added the new principle pursuant to Section 254(b)(7) "that universal service support should be directed where possible to networks that provide advanced services, as well as voice services."<sup>76</sup> Thus, the Commission has found it has the authority to support services and facilities that will carry both telecommunications services

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(1) **QUALITY AND RATES.** -- Quality services should be available at just, reasonable, and affordable rates.

(2) **ACCESS TO ADVANCED SERVICES.** -- Access to advanced telecommunications and information services should be provided in all regions of the Nation.

(3) **ACCESS IN RURAL AND HIGH COST AREAS.** -- Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.

(4) **EQUITABLE AND NONDISCRIMINATORY CONTRIBUTIONS.** -- All providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service.

(5) **SPECIFIC AND PREDICTABLE SUPPORT MECHANISMS.** -- There should be specific, predictable and sufficient Federal and State mechanisms to preserve and advance universal service.

(6) **ACCESS TO ADVANCED TELECOMMUNICATIONS SERVICES FOR SCHOOLS, HEALTH CARE, AND LIBRARIES.** -- Elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services as described in subsection [254] (h).

(7) **ADDITIONAL PRINCIPLES.** -- Such other principles as the Joint Board and the Commission determine are necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Act.

<sup>75</sup> 47 U.S.C. §254(b)(7).

<sup>76</sup> *USF/ICC Transformation Order*, ¶ 65. The Commission also noted in the *USF/ICC Transformation Order*, "Section 254(e) thus contemplates that carriers may receive federal support to enable the deployment of broadband facilities used to provide supported telecommunications services as well as other services." *Id.* ¶ 64.

and advanced non-telecommunications services.<sup>77</sup> Earlier, the Commission found in its *First Report and Order*, in CC Docket No. 96-45, that its universal service policy must “be a fair and reasonable balance” of all of the principles identified in section 254(b) and the additional principle of “competitive neutrality.”<sup>78</sup> The Commission also explained that technological neutrality was integral to the principle of competitive neutrality such that “the marketplace . . . direct the development and growth of technology and [the Commission] avoid[] endorsement of potentially obsolete services” through the universal service programs.<sup>79</sup> Indeed, the Commission found in the *USF/ICC Transformation Order* that it has an affirmative obligation to adopt programs that advance all of the principles in Section 254(b):

. . . we have a “mandatory duty” to adopt universal service policies that advance the principles outlined in section 254(b), and we have the authority to “create some inducement” to ensure that those principles are achieved.<sup>80</sup>

The Race-to-the-Top Program would help to satisfy this “mandatory duty” by addressing the need to promote applications and services requiring recipients to make available ultra-high-

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<sup>77</sup> See Federal Respondents’ United Response to the Joint Universal Service Fund Principal Brief of Petitioners at 13-18, *In re: FCC 11-161*, No. 11-9900 (10<sup>th</sup> Cir., Mar. 6, 2013) (“FCC Appellate Brief”) (the Commission has the authority, exercised in the *USF/ICC Transformation Order* to require universal service recipients not only to provide voice communications but to deploy broadband networks to support advanced information services as a condition of receiving universal service funding). The Commission noted, with respect to interconnected VoIP provided over broadband being the qualifying service for universal service support, that “[i]f interconnected VoIP services are telecommunications services, our authority under section 254 to define universal service after ‘taking into account advances in telecommunications and information technologies and services’ enables us to include interconnected VoIP services as a type of voice telephony service entitled to federal universal service support. And, as explained below, if interconnected VoIP services are information services, we have authority to support the deployment of broadband networks used to provide such services.” *USF/ICC Transformation Order*, ¶ 63 n.67.

<sup>78</sup> *First Report and Order*, ¶¶ 45, 47-49.

<sup>79</sup> *Id.* ¶ 45. See also *id.* ¶ 49. The Commission explained further that “competitive neutrality means that universal service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another.” *Id.* ¶ 47.

<sup>80</sup> *USF/ICC Transformation Order*, ¶ 65.

speed networks in Tier II and Tier III communities over which voice and any other requisite telecommunications would be offered. The advanced voice telecommunications, and other communications and information services being provided over the networks, are beginning to transform Tier I communities like Kansas City and Cleveland. However, there is a danger that many Tier II and Tier III communities where the immediate business case for ultra-high-speed networks is lacking are starting to fall behind. The Race-to-the-Top Program is designed to prevent that result and to accelerate the availability of telecommunications and information services running on ultra-high-speed networks to all areas of the nation. Not only will the Tier II and Tier III communities where Catalyst Funds become available benefit from and enjoy advanced communications capabilities requiring gigabit networks consistent with those that are beginning to yield fruits in larger metropolitan areas, but the increased numbers of communities which have these advanced capabilities – whether Tier I, II, or III – will accelerate the development of applications and services requiring ultra-high-speed networks within and between all communities, including smaller rural communities.<sup>81</sup> By supplementing those private initiatives that have emerged, the Race-to-the-Top Program will help establish a critical mass of communities with ultra-high-speed networks and accelerate the availability of such networks, and the transformational voice and other communications services and applications such networks will make possible, to all areas of the nation.

The Race-to-the-Top Program as administered by the Commission would provide a fair and reasonable balance of the principles contained in and supplementing Section 254(b). As a threshold matter, support would only be available to programs that would provide “advanced

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<sup>81</sup> The Council envisions that the universal service program designed to bring voice and broadband services to unserved areas will remain available to promote the deployment of ultra-high-speed networks.



services, as well as voice services.”<sup>82</sup> Further, in fulfillment of its duty to “establish periodically” “an evolving level of telecommunications services” eligible for support, the Commission would select programs that demonstrate that community anchor institutions would have “[a]ccess to advanced telecommunications and information services” in Tier II and Tier III communities “at just, reasonable, and affordable rates,” that should be provided in “all regions of the Nation.” The Race-to-the-Top Program would complement and enhance existing universal service programs rather than compete with or impede them. Catalyst Funds would be awarded to service and facilities providers that serve community anchor institutions. While those institutions, for example, might include schools, libraries, and hospitals, the Catalyst Funds would be used to enhance voice and advanced communications capabilities among those institutions, other community anchor institutions, and their surrounding neighborhoods.<sup>83</sup> Both the new Program and the existing programs, including the recently announced modernization of the E-Rate program, will be necessary to advance broadly the objectives of Section 254 to bring advanced communications available to all Americans in all parts of the country.<sup>84</sup>

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<sup>82</sup> See *USF/ICC Transformation Order*, ¶ 65, and discussion at 35, *supra*.

<sup>83</sup> These aspects of the Race-to-the-Top Program work in concert with the schools and libraries and health care provider programs that are currently in place under Sections 254(h) of the Act. 47 U.S.C. § 254(h). The funds available from the Race-to-the-Top Program do not in any way diminish the funds that will be available for the existing programs as they come from another source.

<sup>84</sup> Although the Gigabit Communities Race-to-the-Top Program does not set a goal of, and will not result in, all Tier II and Tier III communities receiving Catalyst Funds, the Commission has recognized, including in the Phase I and Phase II programs of the Connect America Fund to provide support for unserved areas in price cap local exchange carrier territories, that universal service consists of many piece parts and that one program or fund does not by itself result in the achievement of universal service. As explained earlier, if implemented successfully with the expected effect, the Program the Council espouses in this Petition will catalyze the deployment of gigabit networks to communities across the nation. Ultimately, however, a subsequent universal service program may be required to complete the work started by the program in bringing gigabit networks to all regions of the country.

The Commission also has the authority to extend universal service to persons or organizations beyond those expressly identified within Section 254, as the Race-to-the-Top Program would do. The Commission recognized long-ago that it has the discretion to extend universal service support to “individuals, groups, or locations other than those identified in section 254.”<sup>85</sup> In its 1997 *First Report and Order*, the Commission declined to extend universal service support “at this time” to “to other groups and organizations, including minorities and community-oriented organizations.”<sup>86</sup> However, the Commission recognized the need and committed itself to monitor developments in the marketplace “in an effort to determine whether [it] must take additional action to ensure affordable access to telecommunications services” to all Americans in light of its obligations under Section 254.<sup>87</sup> Any such programs, the Commission intimated, would complement programs supporting the delivery of telecommunications services to “the particular groups identified by Congress in section 254: low-income consumers; eligible carriers serving rural, insular, and high cost areas; and eligible education and health care providers.”<sup>88</sup>

Furthermore, the Commission has made clear its authority to support not only advanced services but also facilities over which they will be provided that will best achieve the principles of Section 254(b), including those additional principles fashioned by the Commission pursuant to the authority Congress bestowed on it. In the *USF/ICC Transformation Order*, the Commission explained that

[b]y referring to “facilities” and “services” as distinct items for which federal universal service funds may be used, we believe Congress granted the Commission the flexibility not only to designate the types of

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<sup>85</sup> *First Report and Order*, ¶ 54.

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

<sup>88</sup> *Id.*

telecommunications services for which support would be provided, but also to encourage the deployment of the types of facilities that will best achieve the principles set forth in section 254(b) and any other universal service principle that the Commission may adopt under section 254(b)(7). For instance, under our longstanding “no barriers” policy, we allow carriers receiving high-cost support “to invest in infrastructure capable of providing access to advanced services” as well as supported voice services.<sup>89</sup>

The Race-to-the-Top Program, as described herein, by focusing both on the applications and services to be provided and the network facilities to be deployed – both of which will be reviewed by the Commission when evaluating applications – represents the promotion of the perfect marriage of both services and facilities to achieve the objectives of universal service consistent with the principles of Section 254(b) in order to bring advanced communications capability, as well as supported voice services, to all regions of the nation. As the Commission noted in the *FCC Appellate Brief*, “requiring USF recipients to deploy networks capable of providing voice and broadband services ‘advances’ universal service, whereas merely requiring recipients to deploy networks capable of providing traditional circuit-switched voice services would only ‘preserve’ the *status quo*.”<sup>90</sup>

#### **B. The Commission Independently Has the Authority to Establish the Race-to-the-Top Program Under Section 706**

In addition to the authority under Section 254 to establish the Race-to-the-Top Program, the Commission has separate and standalone authority under Section 706 of the 1996 Act to adopt and implement the Program. Section 706 provides the Commission with authority to support broadband networks in order to “accelerate the deployment of broadband capabilities” to

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<sup>89</sup> *USF/ICC Transformation Order*, ¶ 64 (footnotes omitted).

<sup>90</sup> FCC Appellate Brief at 16-17.

all Americans.<sup>91</sup> Section 706(b) requires the Commission to “determine whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion” and, if the Commission concludes that it is not, to “take immediate action to accelerate deployment of such capability by removing barriers to infrastructure investment and by promoting competition in the telecommunications market.”<sup>92</sup>

The Commission’s obligations to act under Section 706 are triggered here because ultra-high-speed networks are not being made available in communities sufficiently rapidly, especially in Tier II and Tier III communities. If these smaller communities are to fully participate in our economy and society, to an extent comparable with larger municipalities, relatively speaking, the Commission must act to remove barriers to investment in ultra-high-speed networks. Catalyst Funds through the proposed Race-to-the-Top Program will empower services and facilities providers, in partnership with community anchor institutions and surrounding neighborhoods, to overcome these barriers and help accelerate the day when ultra-high-speed networks and the applications that can run on them are the norm.

By exercising its authority under section 706 to establish and administer the Race-to-the-Top Program as described in this Petition, the Commission would further Congress’s objective of

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<sup>91</sup> In the *USF/ICC Transformation Order* the Commission concluded that the authority in Section 706(b) to promote broadband networks was “beyond what the Commission possesses under section 706(a) or elsewhere in the Act, to take steps necessary to fulfill Congress’s broadband deployment objectives.” *USF/ICC Transformation Order*, ¶ 70. The same is no less true for ultra-high-speed or Gigabit networks. Further, the Commission has found that “providing support for broadband networks under section 706(b) [does not] conflict[] with section 254, which defines universal service in terms of telecommunications services.” *Id.* ¶ 71.

<sup>92</sup> 47 U.S.C. §1302(b). “[A]dvanced telecommunications capability” is defined, without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video communications using any technology.” 47 U.S.C. §1302(d)(1).

“accelerat[ing] deployment” of advanced telecommunications capability “to all Americans.”<sup>93</sup>

As the Commission found in the *USF/ICC Transformation Order*, where it concluded that Section 706 provided independent legal authority for adopting transformational changes to the universal service program to support broadband services, as well as voice telephony services, to areas as-yet unserved by broadband, federal support need not turn on whether voice services or the underlying broadband service falls within traditional regulatory classifications of telecommunications services under the Act. Rather, under Section 706 (as well as Section 254), it was sufficient that its approach focused on accelerating deployment of advanced communications capability and allowing providers to exercise their own judgment how best to structure their service offerings in order to make such deployment a reality.<sup>94</sup> For these reasons, therefore, the Race-to-the-Top program is authorized by Section 706 as well.

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<sup>93</sup> 47 U.S.C. § 1302(b).

<sup>94</sup> *USF/ICC Transformation Order* ¶ 69. *Accord FCC Appellate Brief* at 27-30 (the Commission “reasonably concluded” in the *USF/ICC Transformation Order* “that section 706(b) empowered it to support broadband-capable networks”). The Commission explained in the *USF/ICC Transformation Order* that it wanted to avoid an outcome where “limiting federal support based on the regulatory classification of the services offered over broadband networks as telecommunications services would exclude from the universal service program providers who would otherwise be able to deploy broadband infrastructure to consumers.” *USF/ICC Transformation Order* ¶ 72. The Commission explained further that there was not a statutory or record basis for concluding that “such a constricted outcome would promote the Congressional policy objectives underlying sections 254 and 706.” *Id.*

## V. CONCLUSION

For the foregoing reasons, the Commission should initiate a rulemaking to implement the Gigabit Communities Race-to-the-Top Program described by the Council herein. That Program will help ensure, in a timely fashion, the development of a critical mass of gigabit communities that will engender tomorrow's transformational applications and services, maintaining the United States' leadership role in advanced telecommunications capabilities and accelerating the day when all Americans have access to the applications and services that gigabit networks will make possible.

Respectfully Submitted,

FIBER TO THE HOME COUNCIL  
AMERICAS



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*Counsel to the Fiber-to-the-Home Council  
Americas*

July 23, 2013

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Universal Service Gigabit Communities	)	RM No. _____
Race-to-the-Top Program	)	
	)	

**DECLARATION OF MICHAEL BURKE**

1. My name is Michael Burke. I am an attorney at Burke Payne, LLC, a Missouri law firm based in Kansas City, Missouri. I received a Bachelor of Arts degree from Georgetown University in 1970 and a Juris Doctor from the Georgetown University Law Center in 1973. I submit this Declaration in support of the Fiber-to-the-Home Council's Petition for Rulemaking in the above-referenced proceeding.
2. Over the past three years, I have served in a number of significant roles in Kansas City devoted to fostering economic growth and entrepreneurship as related to the deployment of Kansas City's gigabit network, provided by Google Fiber.
3. In September 2011, I was appointed to co-chair the Mayors' Bi-State Innovations Team ("MBIT"), which was charged with developing a "playbook" of innovative steps that the community of Kansas City could undertake to promote economic development, advance opportunities, and generally improve daily life in Kansas City using the gigabit network.
4. Following publication of the MBIT report, "Playing to Win in America's Digital Crossroads: A playbook for capitalizing on ultra-high-speed fiber in Kansas City, Kansas, and Kansas City, Missouri" (the "Playbook"), I assumed the role of Advisory Council

Co-Chair for KC Digital Drive, a community-driven organization charged with the implementation of the Playbook.

5. KC Digital Drive was established to serve as a clearinghouse for ideas and strategies developed in the Playbook. In order to achieve its broad charge, KC Digital Drive works with community-led subgroups best-positioned to implement a specific “play” in the playbook. For example, to meet the Playbook’s goal of promoting universal access and capacity, KC Digital Drive works with Connecting for Good, a non-profit organization seeking to bridge the digital divide through deployment of Wi-Fi mesh networks.
6. In addition to my role at KC Digital Drive, I served as chair to Launch KC, another outgrowth of the MBIT Playbook that operates under the auspices of the Kansas City Economic Development Corporation (“EDC”), the Mayor’s Office, and the Downtown Council of Kansas City. Launch KC is designed to create a business-friendly environment for technology entrepreneurs and professionals in the downtown Crossroads Arts District and the broader Kansas City community.
7. Although there has only been limited deployment of gigabit networks in Kansas City, the presence of Google Fiber has already catalyzed significant economic activity within the city’s entrepreneurial community.
8. Before Google began to roll out its network, Kansas City’s entrepreneurial sector—including both entrepreneurs and supporting players (e.g., lawyers, accountants, consultants, and government)—was geographically and socially disjointed, lacking the interaction and communication necessary to effectively grow a next-generation startup community. However, nearly overnight, the prospect of ultra-high-speed broadband



connecting the entire entrepreneurial sector has served as an enabler of a new and tremendous energy.

9. Today, the startup community in Kansas City enjoys a growing number of ultra-high-speed connections. Through the Social Media Club of Kansas City, the Kansas City Startup Village, and events like One Million Cups (sponsored by the Kauffman Foundation), entrepreneurs and related service providers gather regularly to discuss ideas and help each other build new companies. In addition, the Google Fiber network has drawn entrepreneurs from across the country and around the world to Kansas City to establish and grow companies that harness the power of gigabit networks through applications requiring ultra-high-speed bandwidth.
10. Based on my experience drafting the Playbook and working with KC Digital Drive and Launch KC, I believe that applications made possible only by gigabit networks also have transformative potential for community anchor institutions in Kansas City. In particular, these applications hold the promise to create great technological leaps benefitting telemedicine, education, local government operations, public safety, the private sector, and everyday citizens.
11. Moreover, institutions of higher education can play an important role in promoting digital innovation using gigabit networks. For example, working with Launch KC, the University of Missouri-Kansas City was able to obtain a federal i6 Challenge grant, along with a total of \$1 million in matching funds and in-kind services from the City of Kansas City, Sprint Nextel Corporation, and other local corporations. This grant will be used to create a Digital Sandbox that will provide mentoring and proof-of-concept support to

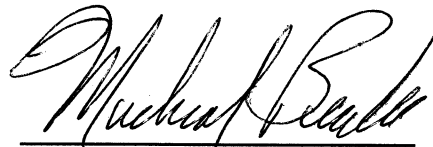
early-stage technology companies in fields including big data, mobile applications, data security, and cloud computing.

12. In my experience and based on my observation, any deployment of gigabit networks must be completed in conjunction with a development plan designed to foster a supportive business environment for entrepreneurs. This plan—like the Playbook—should set forth action items demonstrating how the community will utilize the network to make available next-generation applications to connect community anchor institutions and the people they serve, as well as to promote innovation in health care, education, local government operations, public safety, and the private sector.
13. To that end, Kansas City has initiated strategic dialogues with cities domestically and internationally to share lessons learned and best practices in preparation for and in the use of gigabit networks. Among other cities, Kansas City is working with Austin, TX; Palo Alto, CA; Provo, UT; Barcelona, Spain; Amsterdam, the Netherlands; Singapore; and Toronto, Canada. These open channels of communication and collaboration are necessary to ensuring the communities maximize the potential of gigabit networks.
14. I believe that a Gigabit Communities Race-to-the-Top Program, by materially expanding the number of communities in the United States with ultra-high-speed networks connecting diverse community anchor institutions and their associated communities, would significantly help to accelerate innovation, entrepreneurship, and community development in this country, first in the areas that directly benefit from the Program, but in due course throughout the country. The Race-to-the-Top Program would create a critical mass of cities able to prepare entrepreneurial engagement “playbooks,” and thereby allow cities like Kansas City to share and learn best practices and new innovative

approaches to economic development in a form that will ultimately be available to all communities across the country. Concomitantly, by connecting community anchor institutions with their surrounding communities, the Program will increase the potential customer base for startups building next-generation, gigabit-ready applications. For cities like Kansas City, this presents additional economic development opportunities for our local technology startups, which will be able to connect with other gigabit communities interested in utilizing our next-generation applications.

I declare under penalty of perjury that the foregoing is true and correct to the best of my information and belief.

Executed on June 13, 2013

  
Michael Burke

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Universal Service Gigabit Communities	)	RM No. _____
Race-to-the-Top Program	)	
	)	
Connect America Fund	)	WC Docket No. 10-90

**DECLARATION OF RICHARD WELNOWSKI**

1. My name is Richard Welnowski. I am the Chief Executive Officer (“CEO”) of SightDeckKC, LLC, a Missouri limited liability company based in Kansas City, Missouri. I submit this Declaration in support of the Fiber-to-the-Home Council’s Petition for Rulemaking in the above-referenced proceedings.
2. I have over twenty-five years of experience in image creating, compositing, directing, and editing for professional and commercial work. I have worked as a director, film producer, technical director, cinematographer, and photographer using state-of-the-art digital technology and compositing.
3. My work has appeared on PBS, Nickelodeon, and National Geographic HD, and has received numerous awards, including a 1989 Primetime Emmy Award for “Outstanding Achievement in Special Effects” for the film, “The Orchestra.”
4. SightDeckKC, LLC is a licensed reseller of the SightDeck collaboration system hardware and software. SightDeck was developed by iMatte, Inc., a California corporation. Beyond simply reselling SightDeck, SightDeckKC will be designing and building innovative use cases to showcase the enormous power of the platform.

5. SightDeck is a first-of-its-kind presentation system that allows individuals to deliver effective, engaging presentations to a local audience while simultaneously streaming a high quality “video production” in real time to a distant location. The system hardware uses proprietary high-definition cameras, a video projector, a compositing server, and a large XY infrared active screen interface—akin to a digital “whiteboard”—that allows users to manipulate, annotate, and present content, including presentations, web sites, or cloud-based applications (e.g., 3D-modeling software). The output of the system is a high-definition (“HD”) video that can be used for recording or real-time HD streaming. Another first-of-its-kind feature of SightDeck is “collaborative presentations,” allowing collaborators at up to four SightDeck locations to appear on the screen together, where they can see, interact, and work with each other as if they were in the same room.
6. In addition, iMatte has developed SightDeck Mobile, which allows remote users to participate in SightDeck collaboration sessions in real-time using a web-enabled video camera (e.g., a camera built into a smartphone or tablet). Using SightDeck Mobile, a remote user can send streaming audio-visual content from a mobile device directly to the SightDeck interactive screen. At the same time, the composite output from the SightDeck interactive screen is sent back to the remote user’s mobile device, allowing the remote user to view and communicate with the other SightDeck collaborators. In this way, SightDeck Mobile can be used to provide experts, educators, and others with virtual on-site access to distant or hard-to-reach locations, from third-world medical clinics to storm-battered coastlines.
7. Over time, as the SightDeck technology develops and new innovations are introduced, the number of potential simultaneous collaborators will only increase. However, as the



number of participants increases, so too do the bandwidth requirements. As a result, the number of simultaneous collaborators—and the transformative potential of the tool—is inherently limited by the available bandwidth.

8. Last-generation bandwidth also limits the quality of video that SightDeck can offer. The current generation of SightDeck is constrained by available bandwidth, operating at 720p and 60 frames-per-second (“fps”) and using scalable compression encoders and decoders to adapt to slower connectivity. In order to achieve its ultimate potential in future generations, however, SightDeck will require frictionless networks with ultra-high-speed symmetrical bandwidth and minimal packet loss. This bandwidth is important to offer the quality of video that consumers demand and to ensure the “quality of service” that they expect. Indeed, for multiple participants to collaborate on SightDeck in ultra-high-definition video (which is rapidly becoming the industry standard), while at the same time uploading and downloading content to and from the cloud, SightDeck will need ultra-high-speed connectivity to reach its full potential.
9. SightDeck has a wide array of potential transformative applications in both public and private contexts, including commercial and personal uses. Significantly, because SightDeck is a platform that can support numerous vertical applications, the potential uses are extremely broad. However, due to bandwidth constraints experienced by many community anchor institutions and businesses, SightDeck is currently limited to high-end commercial markets.
10. SightDeck offers significant potential applications for health care institutions. For example, SightDeck will allow doctors to remotely monitor and manage patients, oversee surgeries, and perform diagnoses by enabling the doctor to appear on the recipient’s

monitor and to direct medical procedures through SightDeck Mobile. SightDeck has been working in conjunction with two telemedicine experts from a children's hospital in Kansas City, Missouri to develop a SightDeck-enabled "briefcase," named "Brief+Case Health" ("BCH"). BCH is a remote telemedicine tool that will allow telehealth centers at schools to host both routine and specialty health care appointments between a student, the school, the health care provider, and the student's parent(s). BCH delivers high quality voice, HD video, a digital ancillary exam device interface, and interactive collaborative technology (using SightDeck). In order to use this powerful technology in the most optimal manner, however, users should have access to a network with next-generation bandwidth. As a result, slow broadband speeds limit the transformative power of BCH. With advances in technology, BCH will require even faster bandwidths to allow medical professionals and their patients to reap the benefits that the tool offers. Similarly, for use cases requiring 24-hour, multipoint HD video monitoring, ultra-high-speed networks will be necessary.

11. In addition, Sight Deck has a number of public safety applications designed to fully exploit ultra-high-speed networks. First, in combination with SightDeck Mobile, SightDeck has a great potential to allow federal, state, and local agencies to remotely manage disaster recovery processes. In particular, disaster recovery centers can quickly assess and reach consensus by experts to deploy the correct resources in a more time-critical manner. Where public safety agencies choose to deploy SightDeck, SightDeck would allow those experts to manage the operation from headquarters far more effectively. Second, public safety and law enforcement officials equipped with

SightDeck would be able to coordinate more effectively in response to emergencies and in ways that they cannot now.


12. SightDeck also has a number of potential civil and industrial engineering and architectural uses. For instance, due to its high-resolution interactive interface, SightDeck will allow improved collaboration in the design process, more effective presentation to city councils and oversight boards, and better oversight of construction sites. This use has the potential to dramatically decrease the costs—including travel and project management—associated with public works, from buildings and bridges, to parks and playgrounds.
13. SightDeck also provides tremendous opportunities in the field of education. For example, SightDeck can be used as a distance learning tool suitable for both symmetrical and asymmetrical delivery.



14. The Gigabit Communities Race-to-the-Top Program would have a beneficial impact on SightDeckKC and will spur development of similar advanced applications that utilize ultra-high-speed networks. By establishing a materially larger number of gigabit communities in the next few years, such a program would also allow for accelerated innovation in the SightDeck platform. Further, because so many of the most promising uses of SightDeck involve community anchor institutions, a Program that would connect more of these institutions within individual communities with gigabit broadband would allow them to experience the transformative potential of interactive collaboration technologies like SightDeck.

I declare under penalty of perjury that the foregoing is true and correct to the best of my information and belief.

Executed on July 23, 2013



Richard Welnowski